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Facilities Management Model User Guide

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Section 1: O&M Application

Introduction

The Activeplan Building information system is a computer application that allows the navigate of building information for a property of group of properties. The system has the following parts.

O&M Document Store.

2D Visual Model.

Population and display of PPM system through the 2D visual model.

Supplier and product database.

This section covers how a user can navigate the O&M Document store.

Software Requirements

The document store is contains a range of document types in a variety of formats. Each system (computer) access the system should have the following software loaded for viewing and accessing the documents.

Microsoft Office

MS Word

MS Excel

Internet Explorer version 6 or higher

Adobe

Acrobat Reader

AutoDesk

AutoDesk DWF Viewer version 7

In addition a browser plugin is required to view the 2D Visual model which can be installed from the login page of application.

To run the system from a single workstation or Server Activeplan requires the IIS 6 installed

To run on a single stand alone workstation MSDE must be installed

To run on a server with multiple user accesses MS SQL Server must be installed

Activeplan will install as part of the application the following.

Web application programs

SA File upload

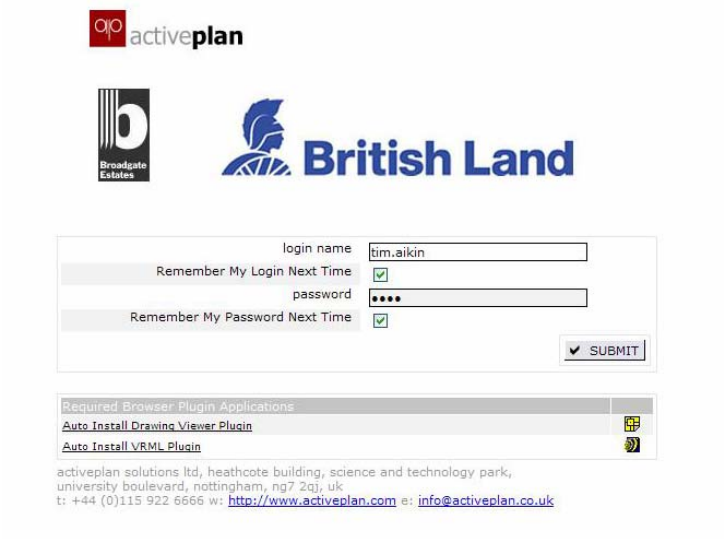
ASP Jeg

Obout Tree control

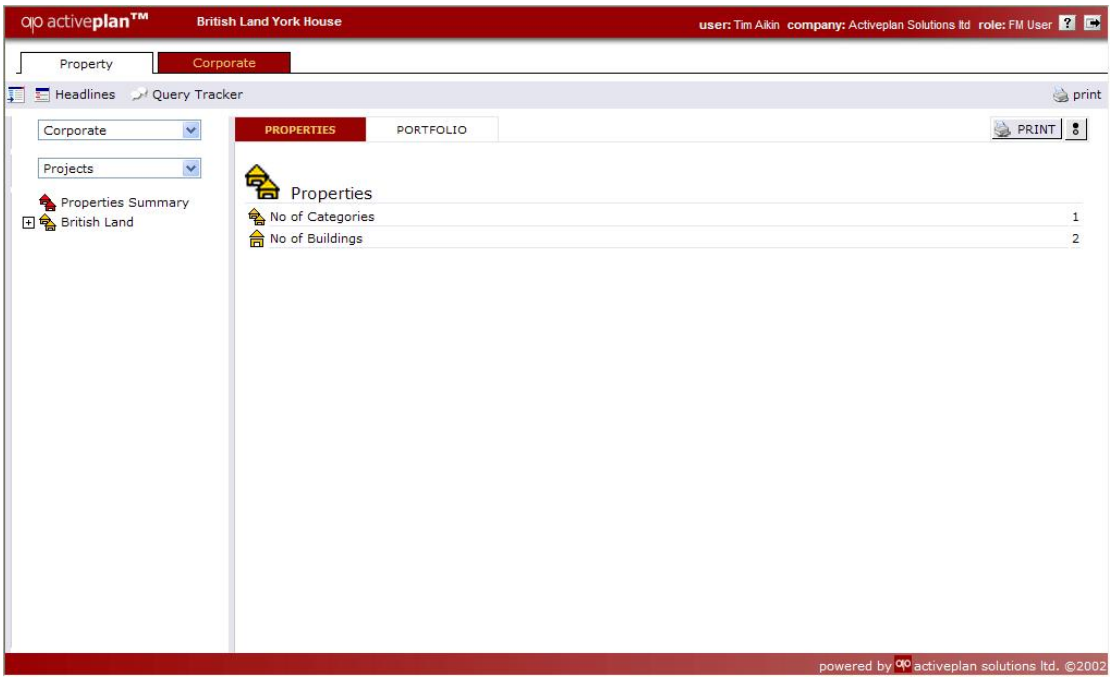
Section 2: O&M Documents

User Access

The application is server based and requires the all users login with a valid login name and password. Each user is configured on the system with roles which determine the access rights to the application functionality and properties.



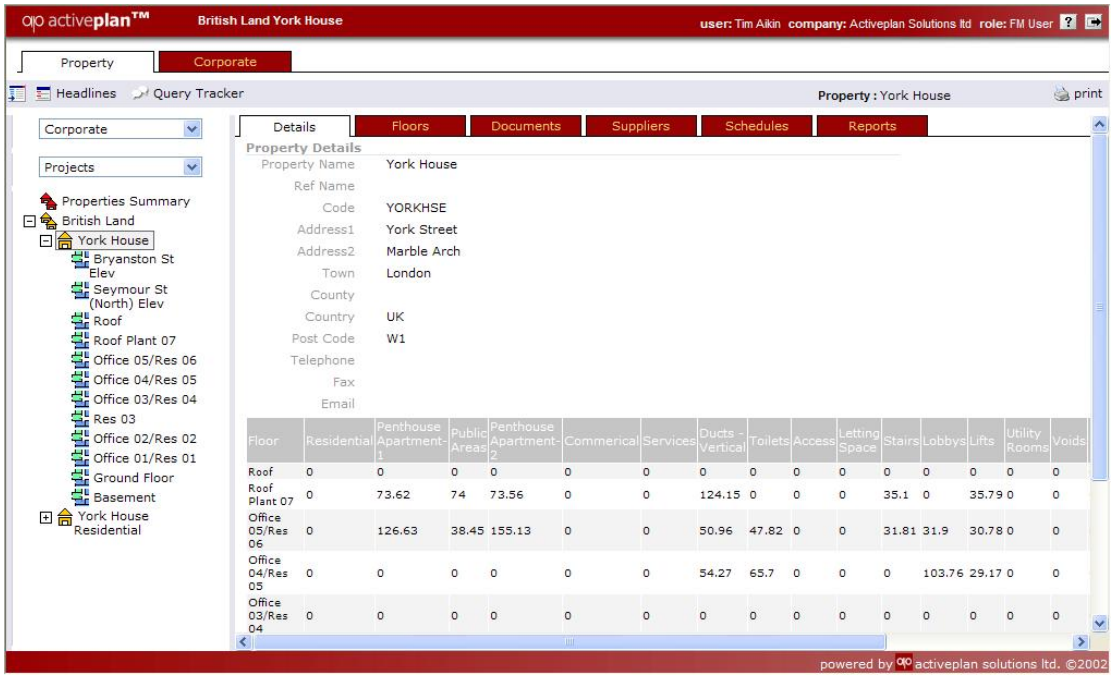
To save time entering logins and passwords if the machine you are using is exclusively used by you or it is your network login click the check boxes to remember your details



The system is designed to hold information for many buildings which you can navigate to by the use of the side tree menu. Click the word to open the tree branches.

Navigation

The building summary is configurable by the system administrator.The standard display screen for the role FM User is as follows.


activeplan™
British Land York House
user: Tim Aikin company: Activeplan Solutions ltd role: FM User
Property
Corporate
Headlines
Query Tracker
Property : York House
print
Corporate
Projects
Properties Summary
British Land
York House
Bryanston St Elev
Seymour St (North) Elev
Roof
Roof Plant 07
Office 05/Res 06
Office 04/Res 05
Office 03/Res 04
Res 03
Office 02/Res 02
Office 01/Res 01
Ground Floor
Basement
York House Residential
Details
Floors
Documents
Suppliers
Schedules
Reports
Property Details
Property Name York House
Ref Name
Code YORKHSE
Address1 York Street
Address2 Marble Arch
Town London
County
Country UK
Post Code W1
Telephone
Fax
Email
Floor | Residential | Penthouse Apartment-1 | Public Areas | Penthouse Apartment-2 | Commerical | Services | Ducts - Vertical | Toilets | Access | Letting Space | Stairs | Lobbys | Lifts | Utility Rooms | Voids
Roof | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0
Roof Plant 07 | 0 | 73.62 | 74 | 73.56 | 0 | 0 | 124.15 | 0 | 0 | 0 | 35.1 | 0 | 35.79 | 0 | 0
Office 05/Res 06 | 0 | 126.63 | 38.45 | 155.13 | 0 | 0 | 50.96 | 47.82 | 0 | 0 | 31.81 | 31.9 | 30.78 | 0 | 0
Office 04/Res 05 | 0 | 0 | 0 | 0 | 0 | 0 | 54.27 | 65.7 | 0 | 0 | 0 | 103.76 | 29.17 | 0 | 0
Office 03/Res 04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0
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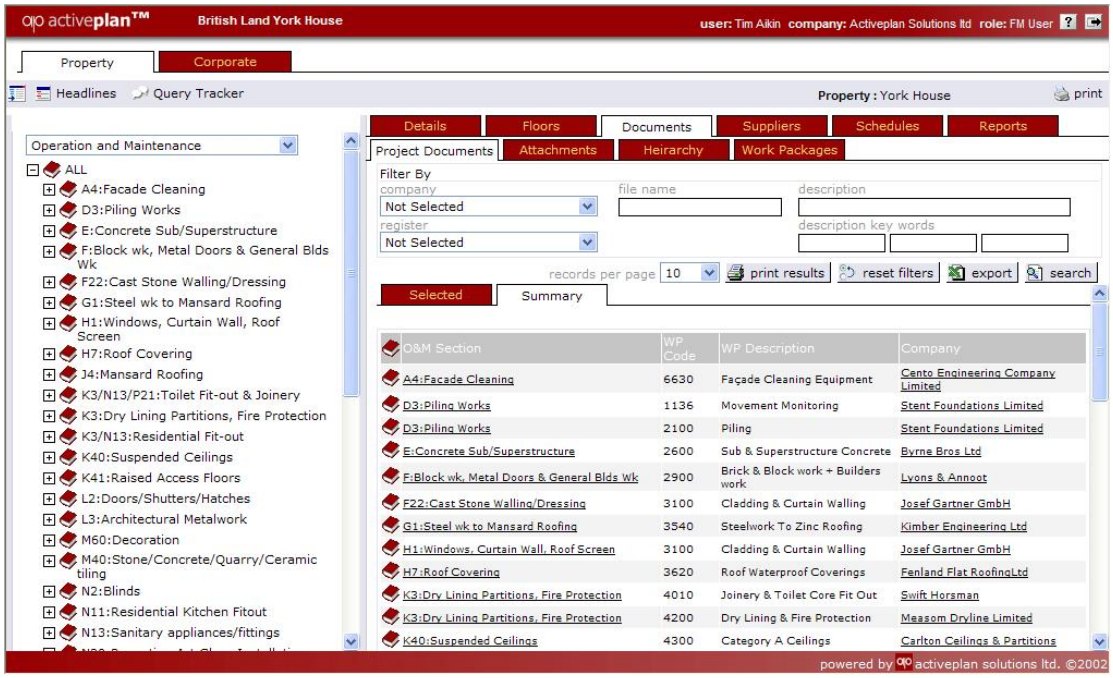
Clicking further in the tree will take you into the graphic navigation of the building.

Sections Layout

Introduction

Clicking the documents tab of the Building Summary screen will navigate to the Building Operation and Maintenance Section.

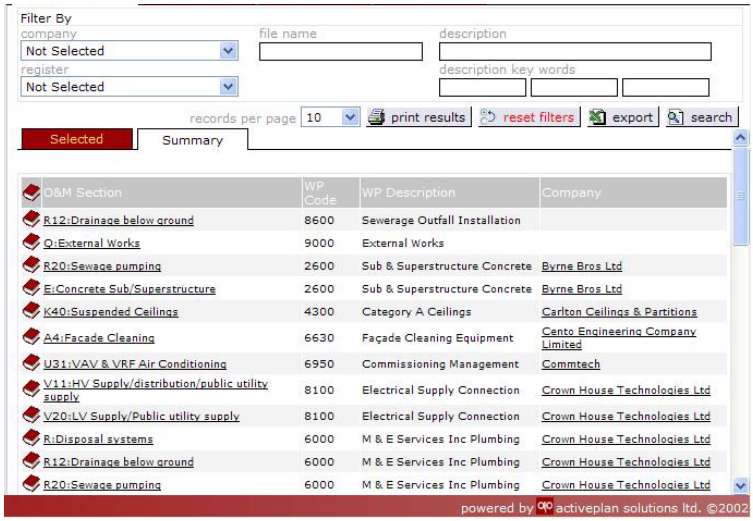


The display is laid out with a systems navigation tree on the left. The naming convention is set out in accordance with the Broadgate Estates Systems Codes adapted from Common Arrangement of Work Sections *(See the Appendix for full listings)*.

Navigation from the Summary

The summary display in the right bottom section of the screen lays out the relationship between the construction process “workpackages” and O&M System sections.

Clicking on the column heading in the grey band will sort the results accordingly.


Filter By
company
Not Selected
file name
description
register
Not Selected
description key words
records per page 10
print results
reset filters
export
search
Selected
Summary
O&M Section
WP Code
WP Description
Company
R12:Drainage below ground 8600 Sewerage Outfall Installation
Q:External Works 9000 External Works
R20:Sewage pumping 2600 Sub & Superstructure Concrete Byrne Bros Ltd
E:Concrete Sub/Superstructure 2600 Sub & Superstructure Concrete Byrne Bros Ltd
K40:Suspended Ceilings 4300 Category A Ceilings Carlton Ceilings & Partitions
A4:Facade Cleaning 6630 Façade Cleaning Equipment Cento Engineering Company Limited
U31:VAV & VRF Air Conditioning 6950 Commissioning Management Commtech
V11:HV Supply/distribution/public utility supply 8100 Electrical Supply Connection Crown House Technologies Ltd
V20:LV Supply/Public utility supply 8100 Electrical Supply Connection Crown House Technologies Ltd
R:Disposal systems 6000 M & E Services Inc Plumbing Crown House Technologies Ltd
R12:Drainage below ground 6000 M & E Services Inc Plumbing Crown House Technologies Ltd
R20:Sewage pumping 6000 M & E Services Inc Plumbing Crown House Technologies Ltd
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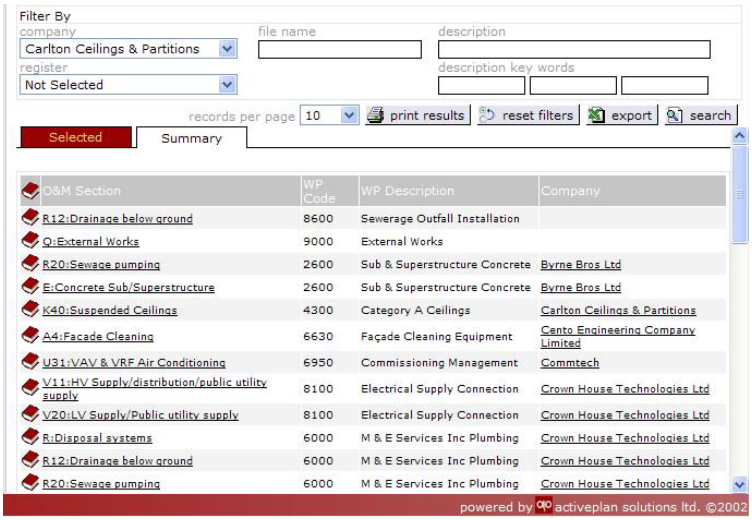
A quick method of setting the filters using the summary information is to click on the underlined information. This will set the filter screen O&M Section and Company.


Filter By
company
Carlton Ceilings & Partitions
file name
description
register
Not Selected
description key words
records per page 10
print results
reset filters
export
search
Selected
Summary
O&M Section
WP Code
WP Description
Company
R12:Drainage below ground 8600 Sewerage Outfall Installation
Q:External Works 9000 External Works
R20:Sewage pumping 2600 Sub & Superstructure Concrete Byrne Bros Ltd
E:Concrete Sub/Superstructure 2600 Sub & Superstructure Concrete Byrne Bros Ltd
K40:Suspended Ceilings 4300 Category A Ceilings Carlton Ceilings & Partitions
A4:Facade Cleaning 6630 Façade Cleaning Equipment Cento Engineering Company Limited
U31:VAV & VRF Air Conditioning 6950 Commissioning Management Commtech
V11:HV Supply/distribution/public utility supply 8100 Electrical Supply Connection Crown House Technologies Ltd
V20:LV Supply/Public utility supply 8100 Electrical Supply Connection Crown House Technologies Ltd
R:Disposal systems 6000 M & E Services Inc Plumbing Crown House Technologies Ltd
R12:Drainage below ground 6000 M & E Services Inc Plumbing Crown House Technologies Ltd
R20:Sewage pumping 6000 M & E Services Inc Plumbing Crown House Technologies Ltd
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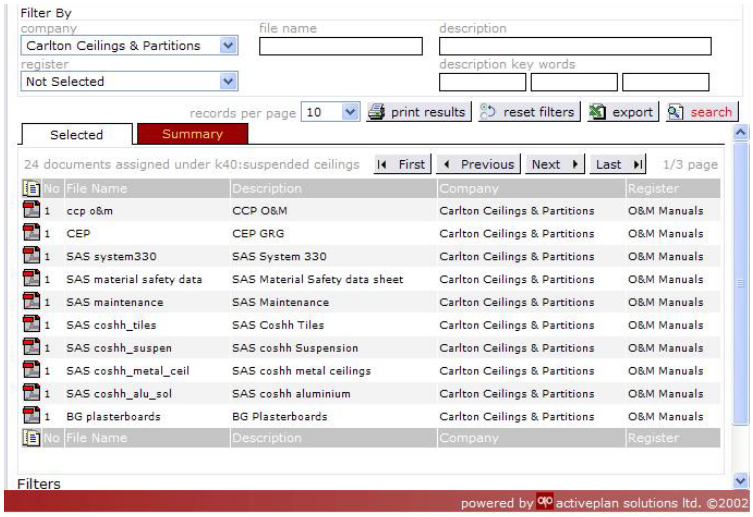
Click the search button to display the information.


Filter By
company
Carlton Ceilings & Partitions
file name
description
register
Not Selected
description key words
records per page 10
print results
reset filters
export
search
Selected
Summary
24 documents assigned under k40:suspended ceilings
First
Previous
Next
Last
1/3 page
No File Name Description Company Register
1 ccp o&m CCP O&M Carlton Ceilings & Partitions O&M Manuals
1 CEP CEP GRG Carlton Ceilings & Partitions O&M Manuals
1 SAS system330 SAS System 330 Carlton Ceilings & Partitions O&M Manuals
1 SAS material safety data SAS Material Safety data sheet Carlton Ceilings & Partitions O&M Manuals
1 SAS maintenance SAS Maintenance Carlton Ceilings & Partitions O&M Manuals
1 SAS coshh_tiles SAS Coshh Tiles Carlton Ceilings & Partitions O&M Manuals
1 SAS coshh_suspen SAS coshh Suspension Carlton Ceilings & Partitions O&M Manuals
1 SAS coshh_metal_ceil SAS coshh metal ceilings Carlton Ceilings & Partitions O&M Manuals
1 SAS coshh_alu_sol SAS coshh aluminium Carlton Ceilings & Partitions O&M Manuals
1 BG plasterboards BG Plasterboards Carlton Ceilings & Partitions O&M Manuals
No File Name Description Company Register
Filters
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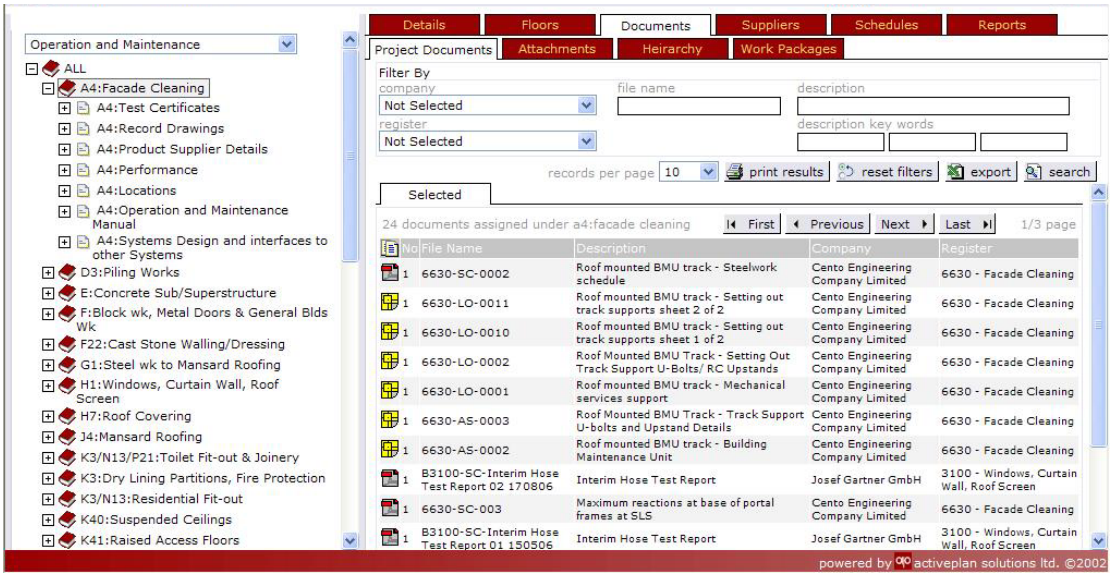
Navigation by System

To Select by a Section from the Navigation tree select the text this will form 3 actions.

1: Open up the tree branches

2: Set the Filter screen to the current section

3: display a list of documents that are under that branch of the tree.


Operation and Maintenance
ALL
A4:Facade Cleaning
A4:Test Certificates
A4:Record Drawings
A4:Product Supplier Details
A4:Performance
A4:Locations
A4:Operation and Maintenance Manual
A4:Systems Design and interfaces to other Systems
D3:Piling Works
E:Concrete Sub/Superstructure
F:Block wk, Metal Doors & General Blds Wk
F22:Cast Stone Walling/Dressing
G1:Steel wk to Mansard Roofing
H1:Windows, Curtain Wall, Roof Screen
H7:Roof Covering
J4:Mansard Roofing
K3/N13/P21:Toilet Fit-out & Joinery
K3:Dry Lining Partitions, Fire Protection
K3/N13:Residential Fit-out
K40:Suspended Ceilings
K41:Raised Access Floors
Details
Floors
Documents
Suppliers
Schedules
Reports
Project Documents
Attachments
Heirarchy
Work Packages
Filter By
company
Not Selected
file name
description
register
Not Selected
description key words
records per page 10
print results
reset filters
export
search
Selected
24 documents assigned under a4:facade cleaning
First
Previous
Next
Last
1/3 page
No File Name Description Company Register
1 6630-SC-0002 Roof mounted BMU track - Steelwork schedule Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0011 Roof mounted BMU track - Setting out track supports sheet 2 of 2 Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0010 Roof mounted BMU track - Setting out track supports sheet 1 of 2 Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0002 Roof Mounted BMU Track - Setting Out Track Support U-Bolts/ RC Upstands Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0001 Roof mounted BMU track - Mechanical services support Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-AS-0003 Roof Mounted BMU Track - Track Support U-bolts and Upstand Details Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-AS-0002 Roof mounted BMU track - Building Maintenance Unit Cento Engineering Company Limited 6630 - Facade Cleaning
1 B3100-SC-Interim Hose Test Report 02 170806 Interim Hose Test Report Josef Gartner GmbH 3100 - Windows, Curtain Wall, Roof Screen
1 6630-SC-003 Maximum reactions at base of portal frames at SLS Cento Engineering Company Limited 6630 - Facade Cleaning
1 B3100-SC-Interim Hose Test Report 01 150506 Interim Hose Test Report Josef Gartner GmbH 3100 - Windows, Curtain Wall, Roof Screen
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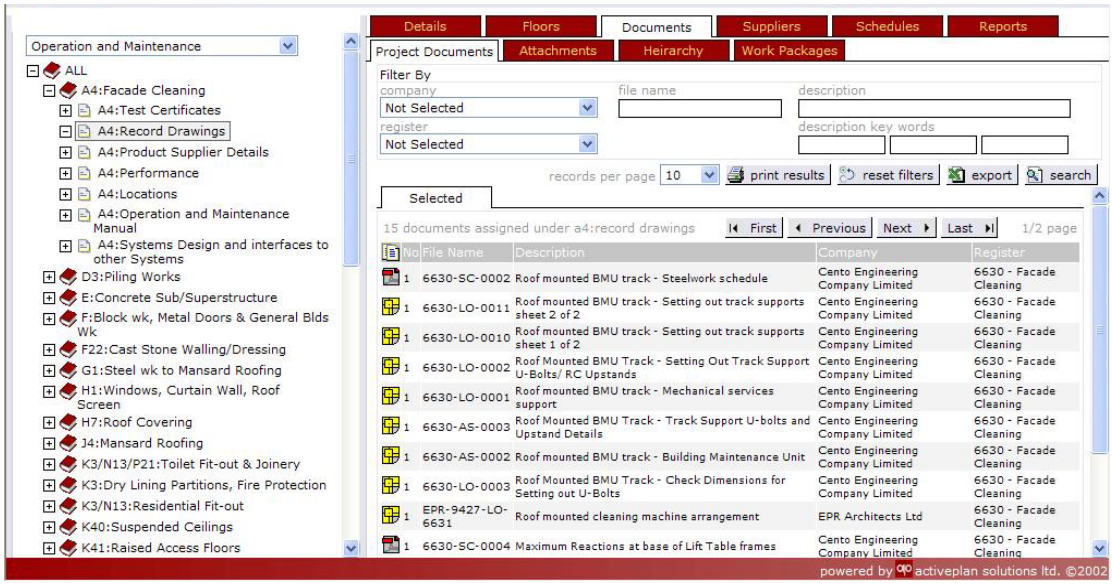
Operation and Maintenance
ALL
A4:Facade Cleaning
A4:Test Certificates
A4:Record Drawings
A4:Product Supplier Details
A4:Performance
A4:Locations
A4:Operation and Maintenance Manual
A4:Systems Design and interfaces to other Systems
D3:Piling Works
E:Concrete Sub/Superstructure
F:Block wk, Metal Doors & General Blds Wk
F22:Cast Stone Walling/Dressing
G1:Steel wk to Mansard Roofing
H1:Windows, Curtain Wall, Roof Screen
H7:Roof Covering
J4:Mansard Roofing
K3/N13/P21:Toilet Fit-out & Joinery
K3:Dry Lining Partitions, Fire Protection
K3/N13:Residential Fit-out
K40:Suspended Ceilings
K41:Raised Access Floors
Details
Floors
Documents
Suppliers
Schedules
Reports
Project Documents
Attachments
Heirarchy
Work Packages
Filter By
company
Not Selected
register
Not Selected
file name
description
description key words
records per page 10
print results
reset filters
export
search
Selected
15 documents assigned under a4:record drawings
First
Previous
Next
Last
1/2 page
No
File Name
Description
Company
Register
1 6630-SC-0002 Roof mounted BMU track - Steelwork schedule Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0011 Roof mounted BMU track - Setting out track supports sheet 2 of 2 Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0010 Roof mounted BMU track - Setting out track supports sheet 1 of 2 Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0002 Roof Mounted BMU Track - Setting Out Track Support U-Bolts/ RC Upstands Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0001 Roof mounted BMU track - Mechanical services support Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-AS-0003 Roof Mounted BMU Track - Track Support U-bolts and Upstand Details Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-AS-0002 Roof mounted BMU track - Building Maintenance Unit Cento Engineering Company Limited 6630 - Facade Cleaning
1 6630-LO-0003 Roof Mounted BMU Track - Check Dimensions for Setting out U-Bolts Cento Engineering Company Limited 6630 - Facade Cleaning
1 EPR-9427-LO-6631 Roof mounted cleaning machine arrangement EPR Architects Ltd 6630 - Facade Cleaning
1 6630-SC-0004 Maximum Reactions at base of Lift Table frames Cento Engineering Company Limited 6630 - Facade Cleaning
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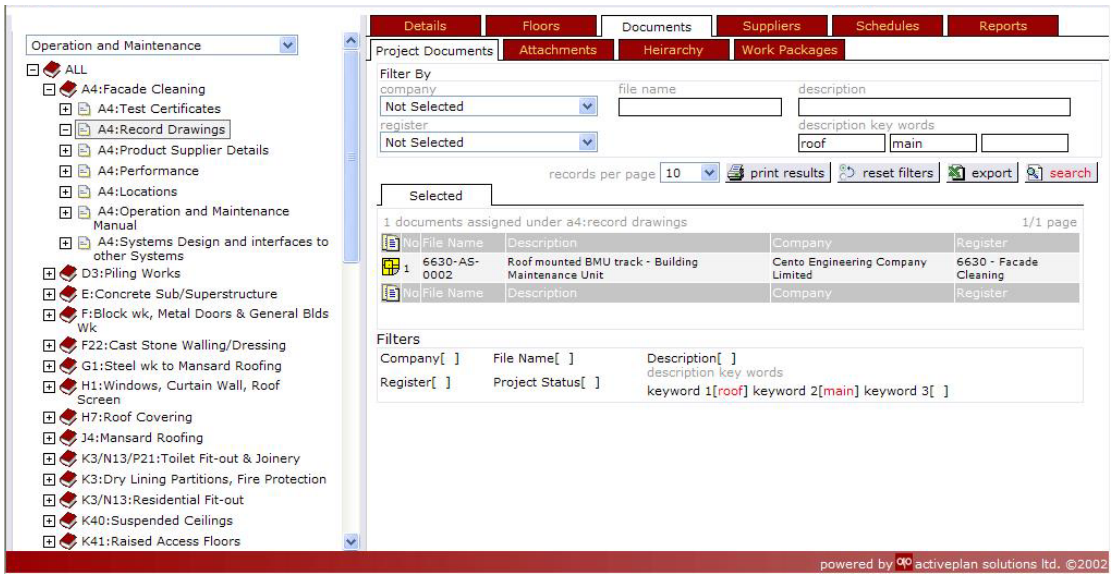
To further filter down information use the keyword filters in the search section *(right top)*

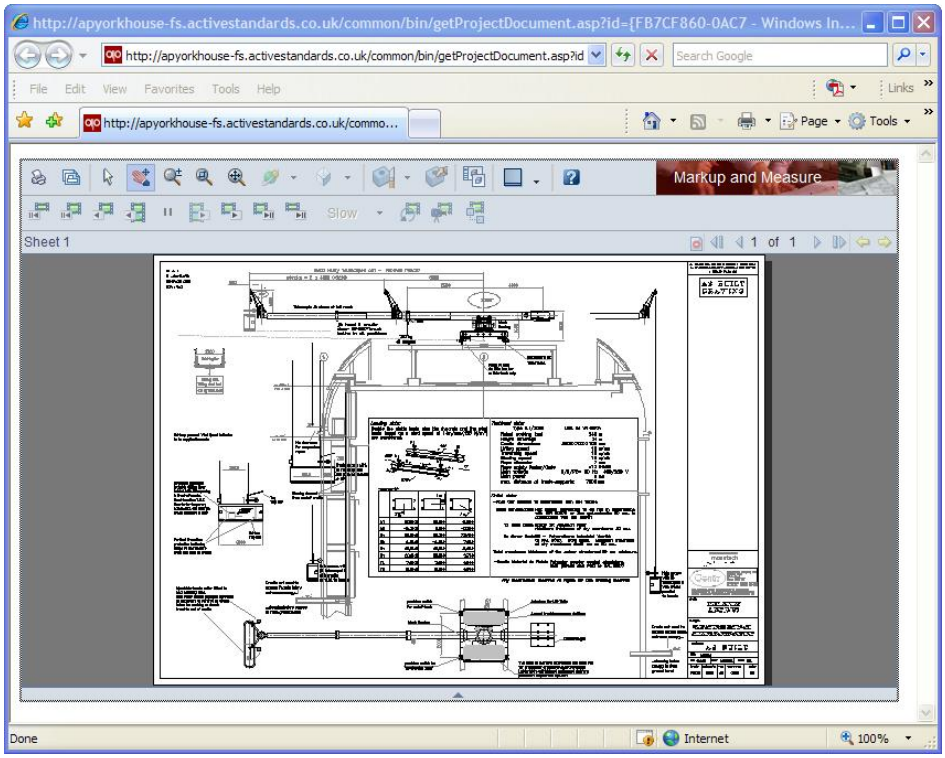


Then select the search button.

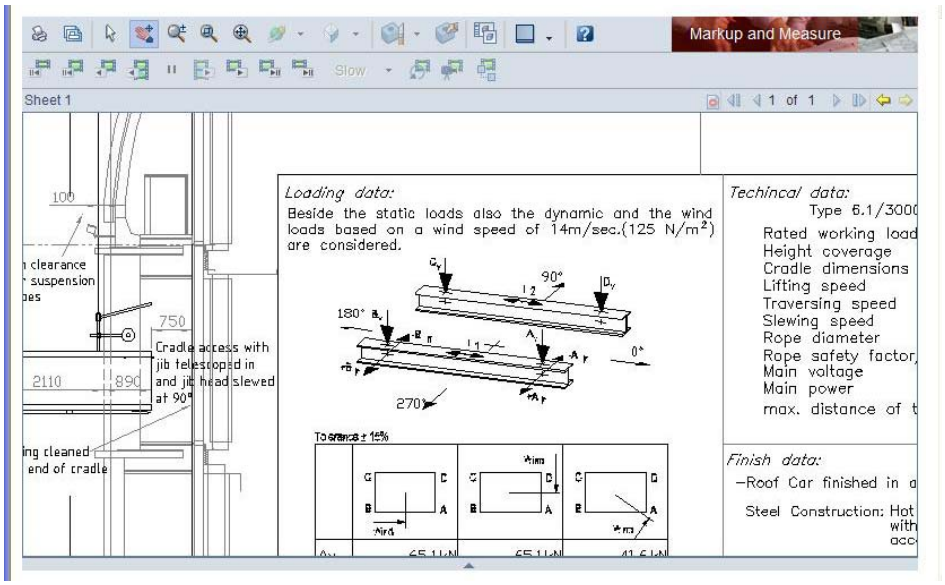
NOTE: when you click on a different section of O&M system navigation tree the search panel will be reset automatically. To reset the search panel manually select the “reset filters” button. WARNING this will reset the currently O&M Section to null.

Opening a document

Document types need to have an application already installed on the machine as stated in “Software Requirements”. Click the icon on the left of the results screen. If the icon is a yellow drawing type then this will open the document within the browser. The application allows you to navigate the drawing and print out the displayed view.



The default navigation using a mouse will be pan. Hold down the left button. If the mouse has a wheel then this will allow zooming in an out. If you are using a tablet PC then the default is pan. To set the zoom select the icon on the menu right of the hand. To switch back to pan select the hand.



Section 3: Navigation of Floor plans and other views

Introduction

Navigation by use of the visual graphics in Activeplan provides 2 levels of view.

- Overview of a Location which can be a floor plan or elevation
- Detail view of a space or room.

Viewing a location can be used for a variety of purposes.

- Navigating to a number space or room
- Navigation to the detail of a space
- Finding the fixtures (items) in the location by means of Assignment values

Finding Items by values

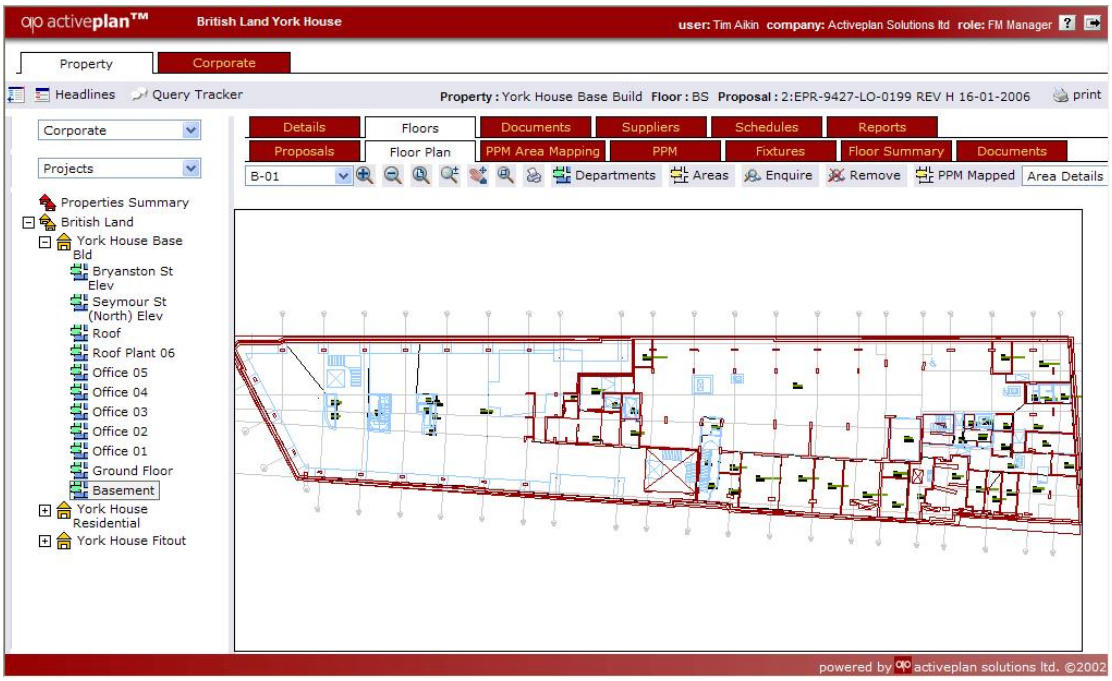
This is feature of the location view provides access not only to locate a fixture or series of fixtures with particular assignment values but also the data behind them such as schedule information, product data, technical documents etc.

Common searches for FM purposes are

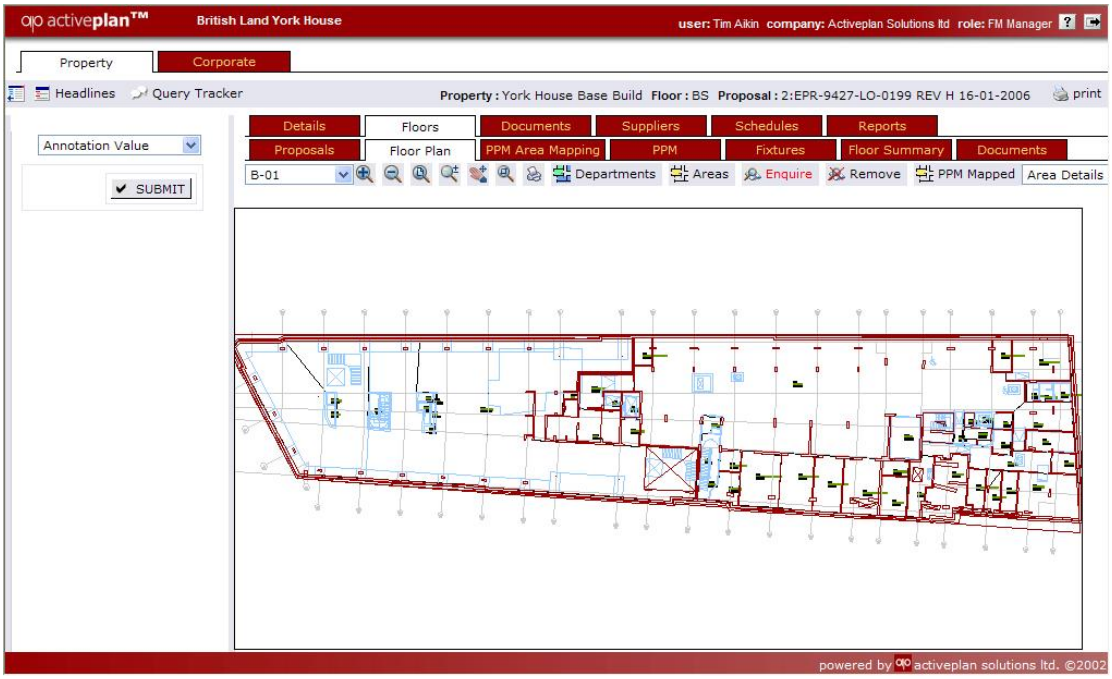
- Door Numbers and Keys
- Luminaries' types
- Switch types

Step through example Door Numbers

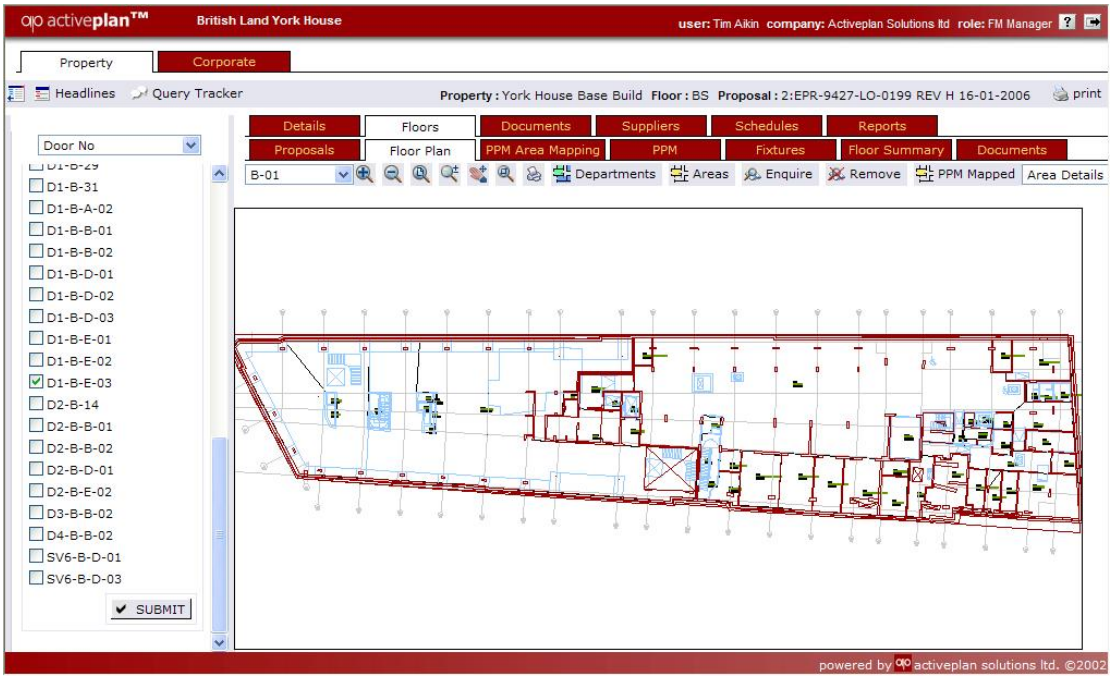
Access a location



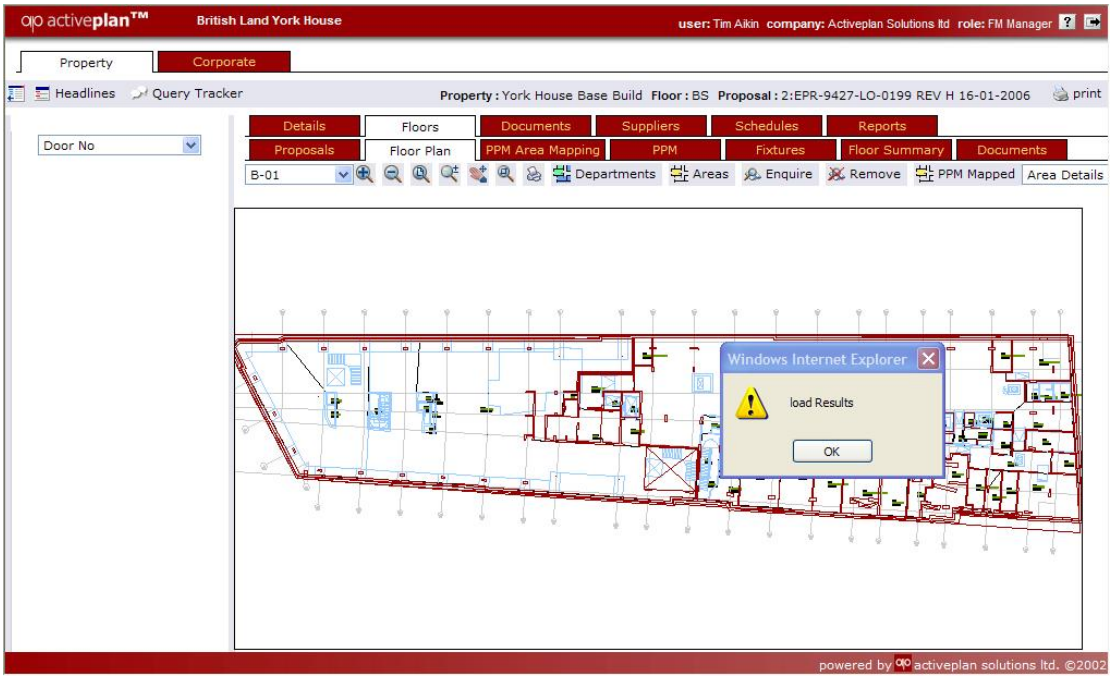
From the graphic tool bar click enquire. This is will then display in the left hand side strip a drop down box with Assignment types.



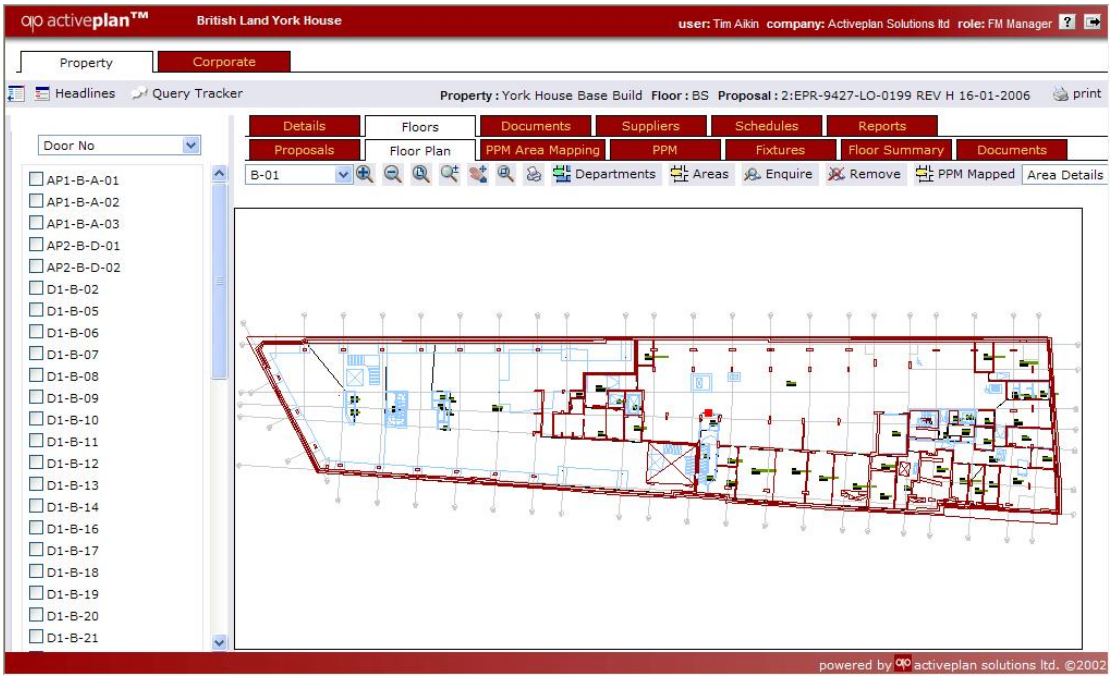
Select for example Door No this will then refresh with all the values of the Assignment type door numbers.



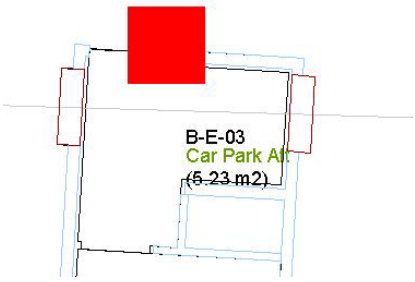
(You can click upto 5 assignment values) Click the submit button. When the query has been processed an information button will appear with load results. Click OK.



The Assignment value list will refresh and extra graphic information will be displayed in the graphics window. Fixtures with the assignment values are displayed with a filled red box.

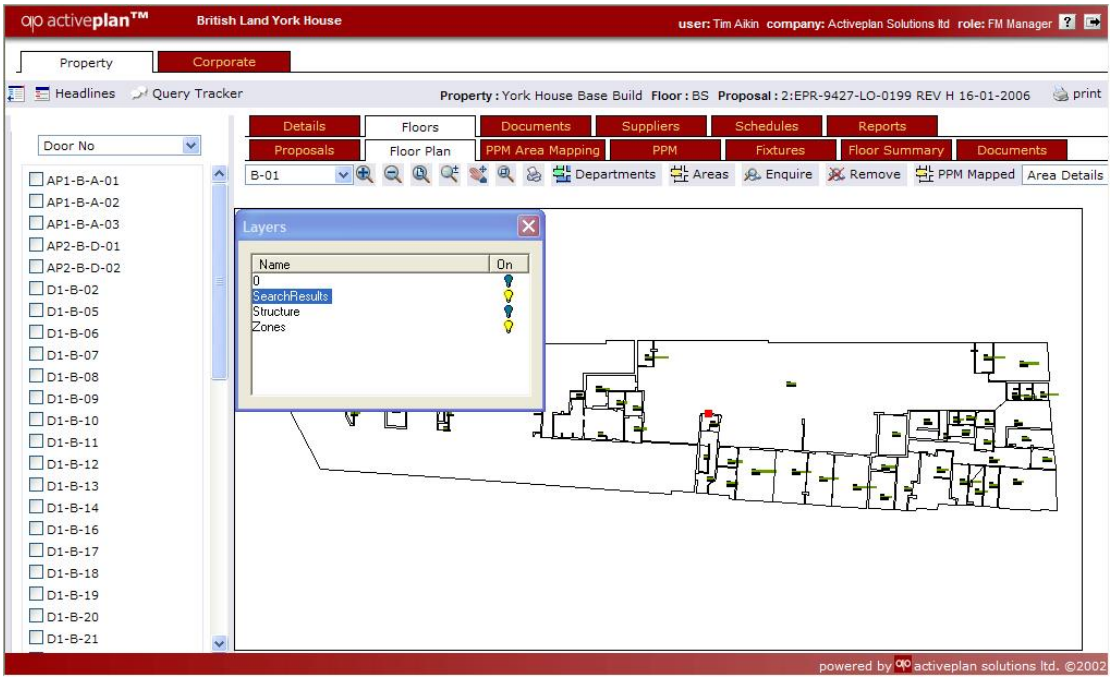


You can zoom into the area of the box or if this is hard to see use the graphics layer control to switch off background layers.

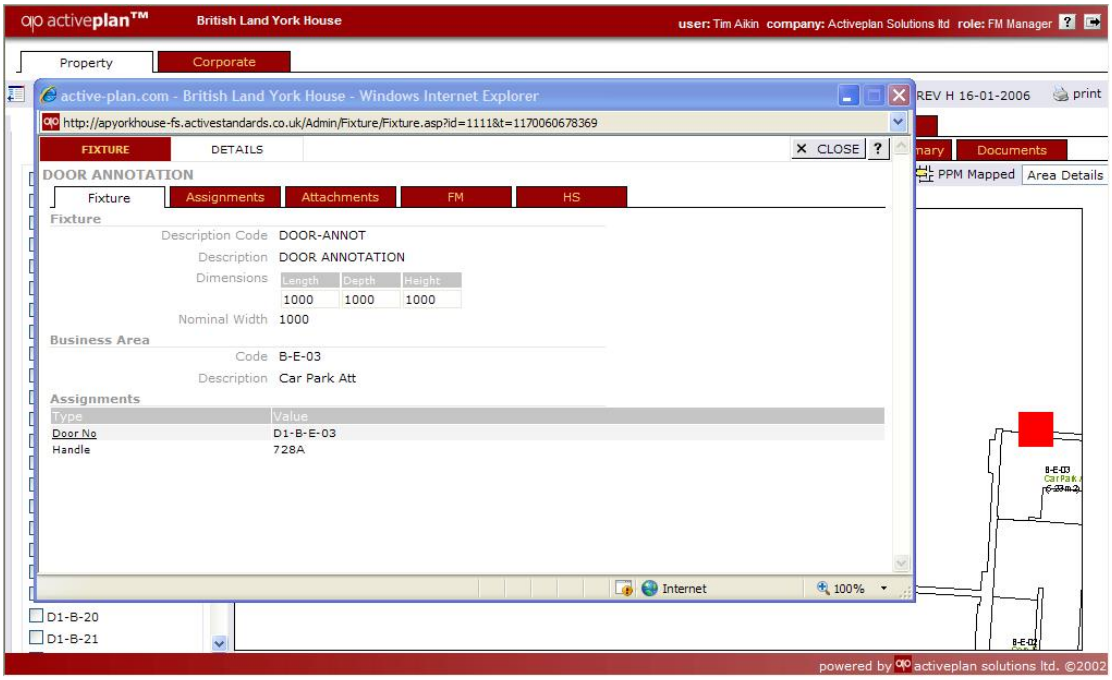


Right mouse click in the graphics window and select layers

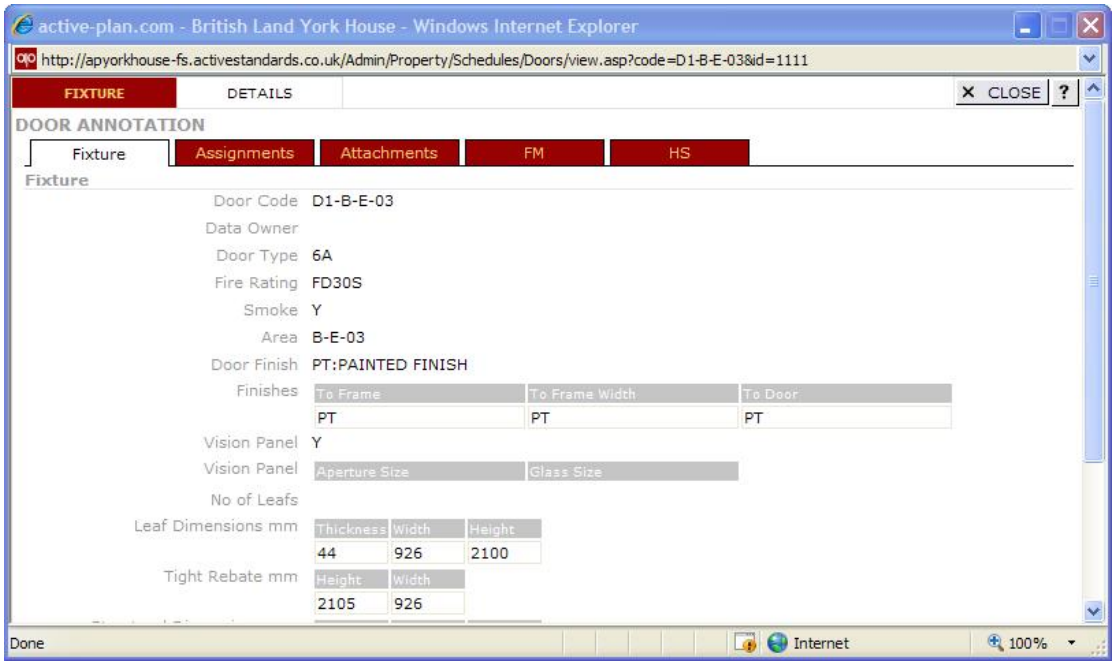
Click on the light bulb to switch to off layer leave Search Results and Zones on



Clicking on the highlighted rectangle will bring up an information box.



Clicking on the Door No Assignment Type will access the schedule information for that door.



Appendix 1: Broadgate Estates System Codes

CODE	Concept Description
A1	General Horizontal Cleaning
A2	General Vertical Cleaning
A3	Horizontal Cleaning Equipment
A4	Vertical Cleaning Equipment
A5	General
B1	Handyman
B10	Health and Safet Equipment
K40	Suspended ceilings
K41	Cavity access floors
N10	Fixtures/furnishings/equipment
N12	Catering equipment
N20	Hospital equipment
N21	Clean rooms
N22	Packaged plant rooms
N23	Laboratory equipment
R10	Rainwater pipework/gutters
R11	Foul drainage above ground
R12	Drainage below ground
R14	Laboratory/industrial waste drainage
R20	Sewage pumping
R21	Sewage treatment/sterilisation
R30	Centralised vacuum cleaning
R31	Refuse chutes
R32	Compactors/macerators
R33	Incineration plant
S1	Water supply
S2	Treated water supply
S3	Gas supply
S4	Petrol/oil storage
S5	Other supply systems
S6	Fire fighting-water
S7	Fire fighting-gas/foam
T10	Gas/oil fired boilers
T11	Coal fired boilers
T12	Electrode/direct electric boilers
T13	Packaged steam generators
T14	Heat pumps
T15	Solar collectors
T16	Alternative fuel boilers
T30	Medium/low temperature hot water heating
T31	Radiators
T32	Underfloor/inwall heating/cooling
T33	Heat distribution/utilisation, steam
T40	Warm air heating systems
T41	Warm air cabinet heaters
T42	Radiant heating system
T50	Heat recovery
T60	Central refrigeration plant
U10	General supply/extract
U11	Toilet extract
U12	Kitchen extract

U13	Car parking extract
U14	Smoke extract/smoke control
U15	Safety cabinet/fume cupboard extract
U16	Fume extract
U17	Anaesthetic gas extract
U20	Dust collection
U31	VAV & VRF air conditioning
U32	Dual-duct air conditioning
U40	Induction air conditioning
U41	Fan-coil air conditioning
U42	Terminal reheat air conditioning
U43	Terminal heat pump air conditioning
U60	Free standing air conditioning units
U61	Window/wall air conditioning units
U70	Air curtains
V10	Electricity generation plant
V11	HV supply/distribution/public utility supply
V12	LV supply/public utility supply
V20	LV distribution
V21	General lighting
V22	General LV power
V30	Extra low voltage supply
V31	DC supply
V32	Uninterrupted power supply
V40	Emergency lighting
V41	Street/area/flood lighting
V42	Studio arena/auditorium lighting
V50	Electric underfloor/inwall/ceiling heating
V51	Local electric heating units
W10	Telecommunications equipment
W11	Staff paging/location equipment
W12	PA/Sound amplification systems
W13	Centralised dictating systems
W20	Radio/tv/cctv equipment
W21	Projection equipment
W22	Advertising display equipment
W23	Clocks
W30	Data transmission systems
W40	Access control
W41	Security detection and alarm systems
W50	Fire detection and alarm systems
W51	Earthing and bonding materials
W52	Lighting protection materials
W53	Electromagnetic screening
W60	Control and monitoring components
W61	Building and energy management
X10	Lifts
X11	Escalators
X12	Moving pavements
X20	Hoists
X21	Cranes
X22	Travelling cradles
X23	Goods distribution
X30	Mechanical document conveying

X31	Pneumatic document conveying
Y10	Pipelines
Y11	Pipeline ancillaries
Y20	Pumps
Y21	Water tanks/cisterns
Y22	Heat exchangers
Y23	Cylinders and calorifiers
Y24	Trace heating
Y25	Cleaning & chemical treatment
Y30	Air ductlines
Y31	Air ductline ancillaries
Y40	Air handling units
Y41	Fans
Y42	Air filtration
Y43	Heating/cooling coils
Y44	Humidifiers/dehumidifiers
Y45	Silencers/acoustic treatment
Y46	Grilles/louvers/diffusers
Y50	Thermal insulation
Y51	Testing and commissioning of mechanical services
Y52	Vibration isolation mountings
Y53	Control components
Y54	Indentification - mechanical
Y60	Conduit and trunking
Y61	HV/LV cables and wiring
Y62	Busbar trunking
Y63	Cable support components
Y70	HV switchgear
Y71	LV switchgear and distribution boards
Y72	Contactors and starters
Y73	Luminaires and lamps
Y74	Accessories for electrical services
Y80	Earthing and bonding components
Y81	Testing and commissioning of electrical services
Y82	Electrical identification components
Y90	Fixings for masonry & concrete
Y92	Motor drives - electric
Z11	Purpose - made metalwork
Z20	Metering

Appendix 2: Common Arrangement of Work Sections

Code	Description
A	Preliminaries/General conditions
A1	The project generally
A10	Project particulars
A11	Drawings
A12	The site/Existing buildings
A13	Description of the work
A2	The Contract
A20	The Contract/Sub-contract
A3	Employer's requirements
A30	Tendering/Sub-letting/Supply
A31	Provision, content and use of documents
A32	Management of the Works
A33	Qualitystandards/control
A34	Security/Safety/Protection
A35	Specific limitations on method/sequence/timing
A36	Employer's requirements for facilities/temporary works/services
A37	Operation/Maintenance ofthefinished building
A4	Contractor's general cost items
A40	Management and staff
A41	Site accommodation
A42	Services and facilities
A43	Mechanical plant
A44	Temporary works
A5	Work by others or subject to instruction
A50	Work/Materials by the Employer
A51	Nominated sub-contractors
A52	Nominated suppliers
A53	Work by statutory authorities
A54	Provisional work
A55	Dayworks
B	Complete buildings
B1	Proprietary buildings
B10	Proprietary buildings
C	Demolitionl Alterationl Renovation
C1	Demolition
C10	Demolishing structures
C2	Alteration - composite items
C20	Alterations - spot items
C3	Alteration- support
C30	Shoring
C4	Repairing/Renovating concrete/masonry
C40	Repairing/Renovating concrete/brick/block/stone
C41	Chemical dpcsto existing walls
C5	Repairing/Renovating metal/timber
C50	Repairing/Renovating metal
C51	Repairing/Renovating timber
C52	Fungus/Beetle eradication
D	Groundwork
D1	Ground investigation/stabilisation/dewatering
D10	Ground investigation
D11	Soil stabilization

D12	Site dewatering
D2	Excavation/Filling
D20	Excavating and filling
D3	Piling
D30	Cast in place concrete piling
D31	Preformed concrete piling
D32	Steel piling
D4	Diaphragm walling
D40	Diaphragm walling
D5	Underpinning
D50	Under pinning
E	In situ concrete/Large precast concrete
E1	Insitu concrete
E10	In situ concrete
E11	Gun applied concrete
E2	Formwork
E20	Formwork for in situ concrete
E3	Reinforcement
E30	Reinforcement for in situ concrete
E31	Post tensioned reinforcement for in situ concrete
E4	In situ concrete sundries
E40	Designed joints in in situ concrete
E41	Worked finishes/Cuning to in situ concrete
E42	Accessories cast into in situ concrete
E5	Precast concrete large units
E50	Precast concrete large units
E6	Composite construction
E60	Precast/Composite concrete decking
F	Masonry
F1	Brick/Blockwalling
F10	Brick/Block walling
F11	Glass block walling
F2	Stone walling
F20	Natural stone rubble walling
F21	Natural stone/ash lar walling/dressings
F22	Cast stonewalling/dressings
F3	Masonry accessories
F30	Accessories/Sundry items for brick/block/stone walling
F31	Precast concrete sills/lintels/copings/features
G	Structural/Carcassing metal/timber
G1	Structural/Carcassing metal
G10	Structural steel framing
G11	Structuralaluminiumframing
G12	Isolated structural metal members
G2	Structural/Carcassing timber
G20	Carpentry/Timber framing/First fixing
G3	Metal/Timber decking
G30	Metal profiled sheet decking
G31	Prefabricated timber unit decking
G32	Edge supported/Reinforced woodwool slab decking
H	Cladding/Covering
H1	Glazed cladding/covering
H10	Patent glazing
H11	Curtain walling

H12	Plastics glazed vaulting/walling
H13	Structural glass assemblies
H14	Concrete rooflights/pavement lights
H2	Sheet/Board cladding
H20	Rigid sheet cladding
H21	Timber weather boarding
H3	Profiled sheet cladding/covering/siding
H30	Fibre cement profiled sheet cladding/covering/siding
H31	Metal profiled/flat sheet cladding/covering/siding
H32	Plastics profiled sheet cladding/covering/siding
H33	Bitumen and fibre profiled sheet cladding/covering
H4	Profiled panel cladding
H40	Glass reinforced cement cladding/features
H41	Glass reinforced plastics cladding/features
H5	Slab cladding
H50	Precast concrete slab cladding/features
H51	Natural stone slab cladding/features
H52	Cast stone slab cladding/features
H6	Slate/Tile cladding/covering
H60	Clay/Concrete roof tiling
H61	Fibre cement slating
H62	Natural slating
H63	Reconstructed stone slating/tiling
H64	Timbershingling
H7	Malleable sheet coverings/cladding
H70	Malleable metal sheet prebonded coverings/cladding
H71	Lead sheet coverings/flashings
H72	Aluminium sheet coverings/flashings
H73	Copper sheet coverings/flashings
H74	Zinc sheet coverings/flashings
H75	Stainless steel sheet coverings/flashings
H76	Fibre bitumen thermoplastic sheet coverings/flashings
J	Waterproofing
J1	Cementitious coatings
J10	Specialist waterproof rendering
J2	Asphalt coatings
J20	Mastic asphalt tanking/damp proof membranes
J21	Mastic asphalt roofing/insulation/finishes
J22	Proprietary roof decking with asphalt finish
J3	Liquid applied coatings
J30	Liquid applied tanking/damp proof membranes
J31	Liquid applied waterproof roof coatings
J32	Sprayed vapour barriers
J33	In situ glass reinforced plastics
J4	Felt/flexible sheets
J40	Flexible sheet tanking/damp proof membranes
J41	Built up felt roof coverings
J42	Single layer plastics roof coverings
J43	Proprietary roof decking with felt finish
K	Unings/Sheathing/Dry partitioning
K1	Rigid sheet sheathing/linings
K10	Plasterboard dry lining
K11	Rigid sheet flooring/sheathing/linings/casings
K12	Under purlin/Inside rail panel linings

K13	Rigid sheet fine linings/panelling
K2	Board/Strip sheathing/linings
K20	Timber board flooring/sheathing/linings/casings
K21	Timber narrow strip flooring/linings
K3	Drypartitions/linings
K30	Demountable partitions
K31	Plasterboard fixed partitions/inner walls/linings
K32	Framed panel cubicle partitions
K33	Concrete/Terrazzo partitions
K4	False ceilings/floors
K40	Suspended ceilings
K41	Raised access floors
L	Windows/Doors/Stairs
L1	Windows/Rooflights/Screens/Louvres
L10	Timberwindows/rooflights/screens/louvres
L11	Metal windows/roofl ights/screens/louvres
L12	Plastics windows/rooflights/screens/louvres
L2	Doors/Shutters/Hatches
L20	Timber doors/shutters/hatches
L21	Metal doors/shutters/hatches
L22	Plastics/Rubber doors/shutters/hatches
L3	Stairs/Galleries/Balustrades
L30	Timberstairs/walkways/balustrades
L31	Metal stairs/walkways/balustrades
L4	Glazing
L40	General glazing
L41	Lead light glazing
L42	Infill panels/sheets
M	Surface finishes
M1	Screeds/trowel led flooring
M10	Sand cement/Concrete/Granolithic screeds/flooring
M11	Masticasphaltflooring
M12	Trowelled bitumen/resin/rubber-latex flooring
M2	Plastered coatings
M20	Plastered/Rendered/Roughcast coatings
M21	Insulation with rendered finish
M22	Sprayed mineral fibre coatings
M23	Resin bound mineral coatings
M3	Work related to plastered coatings
M30	Metal mesh lathing/Anchored reinforcement for plastered coatings
M31	Fibrous plaster
M4	Rigid tiles
M40	Stone/Concrete/Quarry/Ceramic tiling/Mosaic
M41	Terrazzo tiling/In situ terrazzo
M42	Wood block/Composition block/Parquet flooring
M5	Flexible sheet/tile coverings
M50	Rubber/Plastics/Cork/Lino/Carpet tiling/sheeting
M51	Edge fixed carpeting
M52	Decorative papers/fabrics
M6	Painting
M60	Painting/Clear finishing
N	Furniture/Equipment
N1	General purpose fixtures/furnishings/equipment
N10	General fixtures/furnishings/equipment

N11	Domestic kitchen fittings
N12	Catering equipment
N13	Sanitary appliances/fittings
N14	Interior landscape
N15	Signs/Notices
N2	Special purpose fixtures/furnishings/equipment
N20	Appropriate section titles for each project
N21	Appropriate section titles for each project
N22	Appropriate section titles for each project
N23	Appropriate section titles for each project
P	Building fabric sundries
P1	Sundry proofing/insulation
P11	Foamed/Fibre/Bead cavity wall insulation
P2	Sundry finishes/fittings
P20	Unframed isolated trims/skirtings/sundry items
P21	Ironmongery
P22	Sealant joints
P3	Sundry work in connection with engineering services
P30	Trenches/Pipeways/Pits for buried engineering services
P31	Holes/Chases/Covers/Supports for services
Q	Paving/Planting/Fencing/Site furniture
Q1	Edgings for pavings
Q10	Stone/Concrete/Brick kerbs/edgings/channels
Q2	Pavings
Q20	Hardcore/Granular/Cement bound bases/sub-bases to roads/pavings
Q21	In situ concrete roads/pavings/bases
Q22	Coated macadam/Asphalt roads/pavings
Q23	Gravel/Hoggin roads/pavings
Q24	Interlocking brick/block roads/pavings
Q25	Slab/Brick/Sett/Cobble pavings
Q26	Special surfacings/pavings for sport
Q3	Siteplanting
Q30	Seeding/Turfing
Q31	Planting
Q4	Fencing
Q40	Fencing
Q5	SiteFurniture
Q50	Site/Street furniture/equipment
R	Disposal systems
R1	Drainage
R10	Rainwater pipework/gutters
R11	Foul drainage above ground
R12	Drainage below ground
R13	Land drainage
R14	Laboratory/Industrialwastedrainage
R2	Sewerage
R20	Sewage pumping
R21	Sewage treatment/sterilisation
R3	Refuse disposal
R30	Centralised vacuum cleaning
R31	Refuse chutes
R32	Compactors/Macerators
R33	Incineration plant
S	Piped supply systems

S1	Water supply
S11	Hotwater
S12	Hot and cold water (small scale)
S13	Pressurised water
S14	Irrigation
S15	Fountains/Waterfeatures
S2	Treated water supply
S20	Treated/Deionised/Distil led water
S21	Swimming pool water treatment
S3	Gas supply
S30	Compressed air
S31	Instrument air
S32	Natural gas
S33	Liquid petroleum gas
S34	Medical/Laboratory gas
S4	Petrol/Oil storage
S40	Petrol/Oil - lubrication
S41	Fuel oil storage/distribution
S5	Othersupplysystems
S50	Vacuum
S51	Steam
S6	Firefighting-water
S60	Fire hose reels
S61	Dry risers
S62	Wet risers
S64	Deluge
S65	Fire hydrants
S7	Firefighting- gas/foam
S70	Gasfirefighting
S71	Foamfirefighting
S8	Cold water
T	Mechanical heating/Cooling/Refrigeration systems
T1	Heatsource
T10	Gas/Oil fired boilers
T11	Coal fired boilers
T12	Electrode/Direct electric boilers
T13	Packaged steam generators
T14	Heatpumps
T15	Solarcollectors
T16	Alternative fuel boilers
T2	Primary heat distribution
T20	Primary heat distribution
T3	Heat distribution/utilisation
T30	Medium temperature hot water heating
T31	Low temperature hot water heating
T32	Low temperature hot water heating (small scale)
T33	Steam heating
T4	Heat distribution/utilisation - air
T40	Warm air heating
T41	Warm air heating (small scale)
T42	Local heating units
T5	Heatrecovery
T50	Heatrecovery
T6	Central refrigeration/Distribution

T60	Central refrigeration plant
T61	Primary/Secondary cooling distribution
T7	Local cooling/Refrigeration
U	Ventilation/Air conditioning systems
U1	Ventilation/Fume extract
U10	General supply/extract
U11	Toilet extract
U12	Kitchen extract
U13	Carparking extract
U14	Smoke extract/Smoke control
U15	Safety cabinet/Fume cupboard extract
U16	Fumeextract
U17	Anaesthetic gas extract
U2	Industrial extract
U20	Dustcollection
U3	Air conditioning - all air
U30	Low velocity air conditioning
U31	VAVairconditioning
U32	Dual-duct air conditioning
U33	Multi-zone air conditioning
U4	Air conditioning - air/water
U40	Induction air conditioning
U41	Fan-coilairconditioning
U42	Terminal re-heat air conditioning
U43	Terminal heat pump air conditioning
U5	Air conditioning - hybrid
U50	Hybrid system air conditioning
U6	Air conditioning- local
U60	Freestanding air conditioning units
U61	window/Wall air conditioning units
U7	Other air systems
U70	Aircurtains
V	Electrical supply/power/lighting systems
V1	Generation/Supply/HV distribution
V10	Electricity generation plant
V11	HV supply/distribution/public utility supply
V12	LV supply/public utility supply
V2	General LV distribution/lighting/power
V20	LV distribution
V21	General lighting
V22	General LV power
V3	Special types of supply/distribution
V30	Extra lowvoltage supply
V31	DCsupply
V32	Uninterrupted power supply
V4	Special lighting
V40	Emergency lighting
V41	Street/Area/Flood lighting
V42	Studio/Auditorium/Arena lighting
V5	Electric heating
V50	Electric underfloor heating
V51	Local electric heating units
V9	General/Other electrical work
V90	General lighting and power (small scale)

W	Communications/Security/Control Systems
W1	Communications - speech/audio
W10	Telecommunications
W11	Staff paging/location
W12	Public address/Sound amplification
W13	Centralized dictation
W2	Communications-audio-visual
W20	Radio/TV/CCTV
W21	Projection
W22	Advertising display
W23	Clocks
W3	Communications-data
W30	Data transmission
W4	Security
W40	Access control
W41	Security detection and alarm
W5	Protection
W50	Fire detection and alarm
W51	Earthing and bonding
W52	Lightning protection
W53	Electromagnetic screening
W6	Control
W60	Monitoring
W61	Central control
W62	Building automation
X	Transport systems
X1	People/Goods
X10	Lifts
X11	Escalators
X12	Moving pavements
X2	Goods/Maintenance
X20	Hoists
X21	Cranes
X22	Travelling cradles
X23	Goods distribution/Mechanised warehousing
X3	Documents
X30	Mechanical document conveying
X31	Pneumatic document conveying
Y	Services reference specification
Y1	Pipelines and ancillaries
Y10	Pipelines
Y11	Pipelineancillaries
Y2	General pipeline equipment
Y20	Pumps
Y21	Watertanks/cisterns
Y22	Heat exchangers
Y23	Storage cylinders/calorifiers
Y24	Trace heating
Y25	Cleaning and chemical treatment
Y3	Air ductlmes and ancillaries
Y30	Air ductlines
Y31	Air ductline ancillaries
Y4	General air ductline equipment
Y40	Air handling units

Y41	Fans
Y42	Airfiltration
Y43	Heating/Cooling coils
Y44	Humidifiers
Y45	Silencers/Acoustictreatment
Y46	Grilles/Diffusers/Louvres
Y5	Other common mechanical items
Y50	Thermal insulation
Y51	Testing and commissioning of mechanical services
Y52	vibration isolation mountings
Y53	Control components - mechanical
Y54	Identification- mechanical
Y59	Sundry common mechanical items
Y6	Cablesandwiring
Y60	Conduit and cable trunking
Y61	HV/LVcablesandwiring
Y62	Bus bar trunking
Y63	Support components- cables
Y7	General electrical equipment
Y70	HV switchgear
Y71	LV switchgear and distribution boards
Y72	Contactors and starters
Y73	Luminaires and lamps
Y74	Accessories for electrical services
Y8	Other common electrical items
Y80	Earthing and bonding components
Y81	Testing and commissioning of electrical services
Y82	Identification - electrical
Y89	Sundry common electrical items
Y9	Other common mechanical and/or electrical items
Y90	Fixing to building fabric
Y91	Off-site painting/Anti-corrosion treatments
Y92	Motordrives- electric
Z	Building fabric reference specification
Z1	Fabricating
Z10	Purpose made joinery
Z11	Purpose made metalwork
Z2	Fixing/Jointing
Z20	Fixings/Adhesives
Z21	Mortars
Z22	Sealants
Z3	Finishing
Z30	Off-site painting